

- 45. (New) An isolated sentrin- specific protease (SENP) polypeptide comprising the amino acid sequence PIH^L/R XVHW wherein X is a glycine, lysine or glutamic acid.
- 46. (New) The isolated polypeptide of claim 45, comprising at least 25 contiguous amino acid residues of SEQ ID NO: 2, SEQ ID NO: 8, or SEQ ID NO: 10.
- 47. (New) The isolated polypeptide of claim 45, comprising at least 50 contiguous amino acid residues of SEQ ID NO: 2, SEQ ID NO: 8, or SEQ ID NO: 10.
- 48. (New) The isolated polypeptide of claim 45, comprising at least 100 contiguous amino acid residues of SEQ ID NO: 2, SEQ ID NO: 8, or SEQ ID NO: 10.
- 49. (New) The isolated polypeptide of claim 45, comprising at least 150 contiguous amino acid residues of SEQ ID NO: 2, SEQ ID NO: 8, or SEQ ID NO: 10.
- 50. (New) The isolated polypeptide of claim 45, comprising at least 200 contiguous amino acid residues of SEQ ID NO: 2, SEQ ID NO: 8, or SEQ ID NO: 10.
- 51. (New). The isolated polypeptide of claim 48, further comprising amino acid residues 400 to 509 of SEQ ID NO: 8.
- 52. (New) The isolated polypeptide of claim 48, further comprising amino acid residues 535 to 643 of SEQ ID NO: 2.
- 53. (New) The isolated polypeptide of claim 48, further comprising amino acid residues 461 to 568 of SEQ ID NO: 10.
- 54. (New) The isolated polypeptide of claim 45, comprising SEQ ID NO: 2, SEQ ID NO: 8, or SEQ ID NO: 10.
- 55. (New) An isolated polypeptide comprising a sentrin-specific protease SENP1.
- 56. (New) The isolated SENP1 polypeptide of claim 55, comprising at least 25 contiguous amino acids of SEQ ID NO: 2.

57. (New) The isolated polypeptide of claim 55, comprising at least 50 contiguous amino acids of SEQ ID NO: 2.
58. (New) The isolated polypeptide of claim 55, comprising at least 100 contiguous amino acids of SEQ ID NO: 2.
59. (New) The isolated polypeptide of claim 55, comprising at least 150 contiguous amino acids of SEQ ID NO: 2.
60. (New) The isolated polypeptide of claim 55, comprising at least 200 contiguous amino acids of SEQ ID NO: 2.
61. (New) The isolated polypeptide of claim 58, comprising amino acid residues 535 to 643 of SENP1.
62. (New) The isolated polypeptide of claim 58, comprising amino acid residues 527 to 643 of SENP1.
63. (New) The isolated polypeptide of claim 55, wherein the SENP1 polypeptide comprises SEQ ID NO: 2.
64. (New) A method of purifying a sentric-specific protease SENP1 polypeptide from a sample comprising collecting a sentric-specific protease polypeptide sample; incubating the sample with an antibody that specifically binds the SENP1 polypeptide; and obtaining the SENP1 polypeptide.
65. (New) The method of claim 64, wherein the purified SENP1 polypeptide comprises the amino acid sequence of SEQ ID NO: 2.--

Appendix A contains a clean copy of the pending claims.